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# (12) United States Patent Kucherlapati et al.

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# (54) HUMAN ANTIBODIES DERIVED FROM IMMUNIZED XENOMICE

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## Related U.S. Application Data

(60) Division of application No. 08/724,752, filed on Oct. 2, 1996, now Pat. No. 6,150,584, which is a continuation-in-part of application No. 08/430,938, filed on Apr. 27, 1995, now abandoned, and a continuation-in-part of application No. 08/234,145, filed on Apr. 28, 1994, now abandoned, and a continuation-in-part of application No. 08/112;848, filed on Aug. 27, 1993, now abandoned, and a continuation-in-part of application No. 08/031,801, filed on Mar. 15, 1993, and a continuation-in-part of application No. 07/919,297, filed on Jul. 24, 1992, now abandoned, and a continuation-in-part of application No. 07/610,515, filed on Nov. 8, 1990, now abandoned, and a continuation-in-part of application No. 07/466,008, filed on Jan. 12, 1990, now abandoned.

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(List continued on next page.)

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# 57) ABSTRACT

Fully human antibodies against a specific antigen can be prepared by administering the antigen to a transgenic animal which has been modified to produce such antibodies in response to antigenic challenge, but whose endogenous have been disabled. Various subsequent manipulations have been disabled by performed to obtain either antibodies per se or analogs thereof.

## 14 Claims, 18 Drawing Sheets